

# Keeping abreast of the latest diabetes research: Pregnancy, hearing loss and CKD

Too busy to keep up to date with the latest research? In this new series, Erwin Castro, a Diabetes Specialist Nurse in Hastings, selects the latest papers of interest to diabetes nurses.

## T1D and pregnancy

Woolley M et al (2015) *Practical Diabetes* 32: 13–8

This was a qualitative study exploring the perceptions and experiences of being pregnant in women with T1D, and to assess their physical, social, psychological, emotional and educational needs. The study involved seven women in their first pregnancy participating in one-to-one interviews at 15–20 and 32–36 weeks gestation, and at 6–8 weeks post-partum. Seven key themes were identified: knowledge; physical and psychological impact; control and trust; catalyst to action; organisation of care and communications; attendance and intervention; and expectations and systems.

The study showed that most pregnant women with T1D accept that their pregnancy is considered high risk and are keen to make adjustments to achieve a positive outcome. However, it was also noted that the women wanted to “do the normal pregnant bit as well”, “normalise it and make it a nice experience” and make it feel “less fragmented”.

This study illustrates that providing a woman-centred experience of pregnancy care is important and that this can be achieved by healthcare professionals revising their approach to care, utilising the multidisciplinary team, and assisting in the provision of a more holistic approach to care.

## DAFNE training

Elliott J et al (2015) *Diabetic Medicine* 32: 391–8

This study aimed to compare, in a randomised controlled non-inferiority trial, the outcomes of the traditional format for Dose Adjustment for Normal Eating (DAFNE) structured education courses; that is, one delivered over

5 consecutive days (1-week course) with a variant of this format delivered 1 day a week for 5 consecutive weeks (5-week course).

Adults with T1D, from seven DAFNE training centres, were randomised to receive either a 1-week or 5-week course ( $n=213$ ). A qualitative study was embedded in the trial to explore individuals' experiences.

Analysis showed the difference in HbA<sub>1c</sub> levels between the arms at 12 months was  $-0.9$  mmol/mol ( $-0.08\%$ ). For those with a baseline HbA<sub>1c</sub> of  $\geq 58$  mmol/mol (7.5%), the mean change in HbA<sub>1c</sub> was  $-2.0$  mmol/mol ( $-0.18\%$ ) at 12 months ( $P=0.055$ ). Episodes of severe hypoglycaemia were decreased by 82% (relative risk, 0.18 [95% CI, 0.03–0.936];  $P=0.042$ ). Psychosocial outcomes improved significantly and the difference between arms was not significant. Qualitative interviews showed that people overwhelmingly favoured the format of course that they attended. In summary, 5-week and 1-week DAFNE courses are equivalent in terms of biomedical and psychosocial outcomes.

## Hearing loss and T2D

Morrison CL et al (2014) *Practical Diabetes* 31: 366–9

This retrospective study examined the outcomes of people referred for audiological investigations from a primary care diabetes clinic over a 5-year period. Investigations included pure-tone audiometry, and the presence of neuropathy was identified by foot examination and risk stratification. People with diabetes were referred nearly twice as often as people without diabetes (7.5% versus 4%). Hearing loss was identified in 77 individuals. The majority (84.1%) had high-frequency sensorineural hearing loss. Loss of protective sensation on the

10g monofilament test and vibration sense was significantly higher in the hearing loss group when compared with a group with T2D and normal hearing ( $n=219$ ). The hearing loss group had almost twice the rate of at-risk feet (37.7% versus 20.1%). Pre-existing cardiovascular disease was the only pre-morbid condition that was associated with hearing loss. There were no differences in HbA<sub>1c</sub> and lipids. This study showed that hearing loss is prevalent and has a strong association with peripheral neuropathy. As yet, there are no effective strategies to prevent or reverse diabetes-related hearing loss. However, healthcare professionals should recognise the association between diabetes and hearing loss and adopt appropriate preventative health education strategies.

## Chronic kidney disease

Metsärinne K et al (2015) *Primary Care Diabetes* 9: 31–8

This Finnish study aimed to examine the prevalence of chronic kidney disease (CKD) and cardiovascular morbidity in people with T2D treated in primary care. Data were recorded from 629 people with T2D, including kidney function and albuminuria, blood pressure, HbA<sub>1c</sub>, lipid and lipoprotein levels, and diabetes duration, as well as current medication. The prevalence of CKD of any grade (1–5) or albuminuria was 68.6%. Nearly 70% of people with T2D treated in primary care in Finland have some CKD and nearly half have a significant CKD. However, only half of the latter had it diagnosed, thus highlighting the importance of routine screening of nephropathy by measuring both albuminuria and eGFR in people with T2D. Prevention of this complication, with therapy for risk factors, such as hypertension and dyslipidaemia, is warranted. ■